**Intracellular synthesis of gold nanoparticles by *Gluconacetobacter liquefaciens* for delivery of peptide CopA3 and ginsenoside and anti-inflammatory effect on lipopolysaccharide-activated macrophages**

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**Supplementary Figure 1.** Identification of nanoparticle-producing strain. Neighbor-joining tree base on 16S rRNA gene sequence analysis showing relationships of *Gluconacetobacter liquefaciens* kh-1. The strain was identified as *Gluconacetobacter liquefaciens* IFO 12388 with high similarity (98%). The genetic variation, biochemical characteristics, and G+C mole% content (39.70 mol%) of the genomic DNA have been well characterized previously. Bootstrap values (>40%) on 1000 replications are shown at branching points. Scale bar, 0.005 substitutions per nucleotide position.





**Supplementary Figure 2.** Effect of CopA3 on cell viability and NO production in LPS-stimulated RAW264.7 cells. (A) Cell viability of RAW264.7 cells after 24 h incubation with different concentrations of CopA3 was determined by MTT assay. (B) NO production inhibition of CopA3 in LPS-induced RAW264.7 cells. Data are presented as mean ± SEM. \*\**p*<0.01 vs. normal control group; #*p*<0.05 and ##*p* < 0.01 vs. LPS-treated group.